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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,781	09/26/2003	Albrecht Schmidt	13909-075001 / 2002P10144	4346

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EXAMINER	
BARNES, CRYSTAL J	

ART UNIT	PAPER NUMBER
2121	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/670,781	SCHMIDT ET AL.	
	Examiner	Art Unit	
	Crystal J. Barnes	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,6,8-10 and 12-27* is/are rejected.

7)☒ Claim(s) *3,5,7,11 and 28-30* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 September 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/16/04 & 9/3/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The following is an initial Office Action upon examination of the above-identified application on the merits. Claims 1-30 are pending in this application.

Priority

2. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has complied with the conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e).

Information Disclosure Statement

3. The examiner has considered the information disclosure statements (IDS) submitted on 16 August and 3 September 2004.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "76" in the description and "86" in figure 12 have both been used to designate surfaces. Corrected drawing sheets in compliance

with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 2, 6 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claims 2 and 6 recite the limitation "the center of force" in line 1. There is insufficient antecedent basis for this limitation in these claims.

8. The term "compensated" in claim 9 is a relative term which renders the claim indefinite. The term "compensated" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The examiner is unclear of what is meant by compensating the force applied by the surface to the load cells.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 2, 4, 6, 8-10 and 12-27 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,993,400 to Rincoe et al.

As per claim 1, the Rincoe et al. reference discloses a method comprising: sensing (see column 4 lines 50-54, "pressure sensors 20") force information (see column 4 lines 54-58, "force signal, pressure detected") at a plurality of points

(see column 4 lines 63-65, "array of pressure sensors") on a substantially continuous surface (see column 4 lines 40-49, "contact surface"), the force information ("force signal, pressure detected") related to an object (see column 4 lines 46-49, "body part, item") on the surface ("contact surface"); calculating a distribution of force (see column 4 lines 43-46, "distribution of pressure") exerted by the object ("body part, item"), relative to the surface ("contact surface"), based on the force information ("force signal, pressure detected"); and determining a location (see column 8 lines 9-13, "location") of the object ("body part, item") on the surface ("contact surface"), based on the distribution of force ("distribution of pressure").

As per claim 2, the Rincoe et al. reference discloses computing the center of force comprises: computing a total force applied to the surface ("contact surface") by the object ("body part, item"); and computing a center of force (see column 4 lines 43-46, "weight caused by gravity") of the object ("body part, item") on the surface ("contact surface").

As per claim 4, the Rincoe et al. reference discloses sensing ("pressure sensors 20") a variation (see column 8 lines 60-64, "walking motion") in the force information ("force signal, pressure detected"); and detecting a change ("strike

occurs") in the location ("location") of the object ("body part, item"), relative to the surface ("contact surface"), based on the variation ("walking motion") in the force information ("force signal, pressure detected").

As per claim 6, the Rincoe et al. reference discloses sensing ("pressure sensors 20") the force information ("force signal, pressure detected") at a later period of time (see column 8 lines 56-58, "cyclically at a selected time"); and detecting ("pressure sensors 20") a second location ("location") of a second object ("body part, item") on the surface ("contact surface") based on the force information ("force signal, pressure detected").

As per claim 8, the Rincoe et al. reference discloses in which sensing ("pressure sensors 20") force information ("force signal, pressure detected") includes measuring a voltage level (see column 7 lines 62-64, "voltage signals") at a plurality of load cells ("switches 114, 115 and 116"), each of the load cells ("switches 114, 115 and 116") corresponding to each of the plurality of points (see column 7 lines 59-62, "pressure of sensors").

As per claim 9, the Rincoe et al. reference discloses compensating (see column 7 lines 64-67, "analog-to-digital converter 266") for the force ("force

signal, pressure detected") applied by the surface ("contact surface") to the load cells ("switches 114, 115 and 116").

As per claim 10, the Rincoe et al. reference discloses identifying the object ("body part, item") as a person ("body part, item"); and tracking the position (see column 8 lines 60-64, "walking motion") of the person ("body part, item").

As per claim 12, the Rincoe et al. reference discloses identifying the first and second objects ("body part, item") as people ("body part, item"); and tracking a center of activity ("walking motion") of the people ("body part, item").

As per claim 13, the Rincoe et al. reference discloses a system comprising: a plurality of sensors (see column 4 lines 50-54, "pressure sensors 20") below different points on a substantially continuous surface (see column 4 lines 40-49, "contact surface"), the sensors ("pressure sensors 20") operable to sense force information (see column 4 lines 54-58, "force signal, pressure detected"); and a processor (see column 4 lines 63-65, "microcomputer 30") connected to the sensors ("pressure sensors 20") and operable to determine contextual information (see column 8 lines 9-13, "location") about a first object ("body part, item") on the surface ("contact surface"), based on the force information ("force signal, pressure detected").

As per claim 14, the rejection of claim 2 is incorporated and further claim 14 contains limitations recited in claim 2; therefore claim 14 is rejected under the same rationale as claim 2.

As per claim 15, the rejection of claim 4 is incorporated and further claim 15 contains limitations recited in claim 4; therefore claim 15 is rejected under the same rationale as claim 4.

As per claim 16, the rejection of claim 6 is incorporated and further claim 16 contains limitations recited in claim 6; therefore claim 16 is rejected under the same rationale as claim 6.

As per claim 17, the rejection of claim 2 is incorporated and further claim 17 contains limitations recited in claim 2; therefore claim 17 is rejected under the same rationale as claim 2.

As per claim 18, the rejection of claim 4 is incorporated and further claim 18 contains limitations recited in claim 4; therefore claim 18 is rejected under the same rationale as claim 4.

As per claim 19, the Rincoe et al. reference discloses a visualizer (see column 4 lines 58-61, "display 34") that is operable to generate visual representations (see

column 6 lines 15-17, "display screen 34") of the force information ("force profile").

As per claim 20, the Rincoe et al. reference discloses the sensors ("pressure sensors 20") include four load sensors ("pressure sensors 20") in a rectangular configuration (see figure 1 and column 4 lines 50-54, "mxn matrix").

As per claim 21, the Rincoe et al. reference discloses the surface ("contact surface") includes a table (see column 4 lines 40-42, "furniture").

As per claim 22, the Rincoe et al. reference discloses the surface ("contact surface") includes a shelf (see column 4 lines 40-42, "furniture").

As per claim 23, the Rincoe et al. reference discloses further comprising a personal computer (see column 7 lines 45-49, "programmable computer 230") connected to the processor ("dedicated central processing unit 232").

As per claim 24, the rejection of claim 6 is incorporated and further claim 24 contains limitations recited in claim 6; therefore claim 24 is rejected under the same rationale as claim 6.

As per claim 25, the Rincoe et al. reference discloses a method comprising: sampling (see column 4 lines 50-54, "pressure sensors 20") force information (see column 4 lines 54-58, "force signal, pressure detected") at points on a continuous

surface (see column 4 lines 40-49, "contact surface") during a plurality of time intervals (see column 8 lines 56-58, "cyclically at a selected time"); and identifying an interaction (see column 4 lines 43-46, "distribution of pressure") between an object (see column 4 lines 46-49, "body part, item") and the surface ("contact surface") based on the sampled information ("force signal, pressure detected").

As per claim 26, the Rincoe et al. reference discloses computing an average force (see column 6 lines 25-27, "excess pressures") on the surface ("contact surface") during each of the time intervals ("cyclically at a selected time").

As per claim 27, the Rincoe et al. reference discloses computing a variability (see column 6 lines 20-27, "increase or decrease") in the force ("swelling or atrophy") on the surface ("arm") during each of the time intervals ("cyclically at a selected time").

Allowable Subject Matter

11. Claims are 3, 5, 7, 11 and 28-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to pressure sensitive surfaces in general:

USPN 7,077,009 B2 to Lokhorst et al.

USPN 6,958,451 B2 to Breed et al.

USPN 6,109,177 to Stanley et al.

USPN 6,033,432 to Augustine et al.

USPN 6,002,994 to Lane et al.

USPN 5,476,103 to Nahsner

USPN 5,054,323 to Hubbard et al.

USPN 4,695,963 to Sagisawa et al.

JPPN 62-71828 A to BAN et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Crystal J. Barnes whose telephone number is

571.272.3679. The examiner can normally be reached on Monday-Friday alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571.272.3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Crystal J Barnes

CRYSTAL J. BARNES
PRIMARY PATENT EXAMINER
CJB
11 September 2007